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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,956	01/02/2002	Rupal Parikh	INTL-0654-US	2162

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EXAMINER	
WONG, LINDA	

ART UNIT	PAPER NUMBER
2611	

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/038,956	PARIKH, RUPAL	
	Examiner	Art Unit	
	Linda Wong	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,8-14,21-24 and 27-33* is/are rejected.

7)☒ Claim(s) *5-6,15-20,25-26* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-30 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

2. **Claims 32 and 33** are objected to under 37 CFR 1.75 as being a substantial duplicate of claim 31. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).
3. **Claim 2, line 2**, recites the limitation "the next write cycle" in claim 31. There is insufficient antecedent basis for this limitation in the claim.
4. **Claim 10, lines 4 and 8**, recites the term "if". "If" is an indefinite term, thus it is suggested by the examiner to change the term to "when".
5. **Claim 20, lines 5 and 9**, recites the term "if". "If" is an indefinite term, thus it is suggested by the examiner to change the term to "when".
6. **Claim 30, lines 5 and 9**, recites the term "if". "If" is an indefinite term, thus it is suggested by the examiner to change the term to "when".

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 1,2,8,11-12,21-22,31-33** are rejected under 35 U.S.C. 102(b) as being anticipated by Priem et al (US Patent No.: 5070443).

   a. **Claim 1**, Fig. 3a shows outputting a plurality of data units at a source location (Fig. 3a, labels data, 11 and system A) in a first clocked domain (Fig. 3a, label clkA) written to a target location in a second clocked domain (Fig. 3a, labels clkB and System B). Col. 1, lines 49-50, Priem et al discloses well known asynchronous interface having a different clock frequencies and Col. 2, lines 28-43, Priem et al discloses a summary of the invention in which write handshake circuitry is invented for an asynchronous system transferring data between sending and receiving computer systems with a first and second clocked domain (Fig. 1, labels clkA and clkB) using a state machine (Fig. 1, labels 16 and 17 and Col. 4, lines 5-9 and lines 15-17). Although Priem et al does not explicitly state receiving a plurality of data units at a source location, such a limitation is inherent within the system for transferring data within two computer systems.

   b. **Claim 31**, Priem et al discloses detecting at said first clocked domain an enable or write signal (Fig. 3a, label write) to control writing of said plurality of data units (Fig. 3a, label data) from the source location (Fig. 3a, label System A) to a target location (Fig. 3a, label System B) in a second clocked domain (Fig. 3a, label System B and clkB) (Col. 4, lines 15-31, lines 54-67, Col. 6, lines 13-34, lines 59-67 and Col. 7, lines 1-5), synchronizing the enable signal with respect to the second clocked domain (Fig. 3a, labels 12,32,33, and clkB and Col. 6,

lines 59-66), in response to said synchronized enable signal (Fig. 3a, output from label 33), transferring said plurality of data units from the first clocked domain to a target location in said second clocked domain (Fig. 3a, labels data, System A,30,35 and System B).

c. **Claims 32 and 33** inherit all the limitations of claim 31.

d. **Claim 2**, Priem et al discloses outputting a feedback signal or acknowledgement signal (Fig. 3a, label Pre-Ack and Col. 4, lines 65-67) to the first clocked system (Fig. 3a, label 14 and System A) to indicate at least one transmission of said plurality of data units (Col. 6, lines 19-26, lines 22-26 and Col. 4, lines 21-31) and available of said second clocked domain for the next write cycle. (Col. 4, lines 21-31)

e. **Claim 8**, Priem et al discloses a synchronizer, within the state machine, for enabling an asynchronous transfer between the first and second clocked domain (Fig. 3a, labels 11, system a, system b, 30,32,33,35, Col. 4, lines 51-67, Col. 5, lines 9-39, Col. 6, lines 59-67 and Col. 7, lines 1-5)

f. **Claim 11** inherits all the limitations of claim 1.

g. **Claim 12** inherits all the limitations of claim 2.

h. **Claim 21** inherits all the limitations of claim 1.

i. **Claim 22** inherits all the limitations of claim 2.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. **Claims 3,4,9,10,13-14,23-24,27-30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Priem et al (US Patent No.: 5070443) in view of Mitchell et al (US Patent No.: 5793994).

   a. **Claim 3**, Priem et al discloses initializing a data transfer to the target location in the second domain (Fig. 3a, labels data and system b), generating a second signal indicating synchronization of said enable signal with response to said second clocked domain based on the initialization of data transfer (Fig. 3a, label write, 32, 33 and 35 and Col. 6, lines 59-67 and Col. 7, lines 1-5), initiating the data transfer from the source location in the first clocked domain to the second clocked domain target location in response to the second signal (Fig. 3a, label System A, Data, 30, 35 and output from label 33) and generating a third signal indicating transmission of the data and availability for the first clocked domain based on the initiation of the data transfer (Fig. 3a, label pre-ack and System A). Although Priem et al fails to disclose providing the first clocked domain based on the enable signal a first signal indicating arrival or data and initializing transfer based on the first signal, Mitchell et al discloses a slave or source location sending a signal requesting or indicating data is ready for transfer.

Upon command a write or first or address signal is sent to the bus indicating transfer. (Col. 6, lines 44-50) It would be obvious to one skilled in the art to incorporate a bus, request for transfer and write or first signal to indicating transfer as disclosed by Mitchell et al, which can be found in a computer as disclosed by Priem et al (Col. 3, lines 57-58) to prepare bus and target location for transfer of data and allow for proper communication for asynchronous transmission as disclosed by Priem et al (Col. 2, lines 28-32) so to speed the operation of asynchronous interfaces connecting different systems. (Col. 2, lines 21-23 of Priem et al)

b. **Claim 4**, Although Priem et al fails to disclose the stages of the state machine, Michell et al discloses outputting a first signal or a request signal when data is ready for transfer (Fig. 5, labels 500 and 501).

c. **Claim 9**, Priem et al discloses in the state machine driving the synchronizer to transfer data. Although Priem et al fails to disclose stages and protocols of the state machine, Mitchell et al discloses implementing a protocol causing the transition between the first state to second state to enable transferring of data (Fig. 5, label 500,501).

d. **Claim 10**, Mitchell et al discloses in response to the enable signal transitioning from an initial state (Fig. 5, label 500) to said second state (Fig. 5, label 501) including a plurality of target states (Fig. 5, labels 502-505), when conditions are met, the synchronizer or state machine allows data transfer from the first clocked domain to a second clocked domain (Fig. 5, labels 503-505, Fig. 1,

labels 10-13,15-16) and when conditions are not met, hold to transfer is implemented. (Fig. 5, labels 500-505) Although Mitchell et al does not explicitly disclose an asynchronous transmission of data, Priem et al discloses such a limitation, wherein a state machine controls the asynchronous transmission. (Fig. 3a, label state machine, 17 and Col. 2, lines 28-43)

e. **Claim 13** inherits all the limitations of claim 3.

f. **Claim 14** inherits all the limitations of claim 4.

g. **Claim 23** inherits all the limitations of claim 3.

h. **Claim 24** inherits all the limitations of claim 4.

i. **Claim 27**, Mitchell et al discloses storing instructions (Col. 7, lines 19-23) for transferring data from the first clocked domain to the second clocked domain (Fig. 5 and Fig. 1, labels 10-13 and 15 and 16) and for handling switching of clocks (Fig. 1, labels 10-13 and 15-16) wherein the storage units (Fig. 1, labels 10-13 and 15-16), inherently, performs functionalities at different clocks or timings since the purpose of the bus is to regulate transferring of data between the source location to the target location. (Col. 4, lines 54-65). Mitchell et al discloses the processor (Fig. 1) includes a bus comprising a request queue, which is independently clocked logic (Fig. 7, labels bus request queue) from the first and second clocked domain (Fig. 1, labels 10-13 and 15-16) which is controlled by a next request address or clocked logic (Fig. 7, label 706).

j. **Claim 28** inherits all the limitations of claim 8.

k. **Claim 29** inherits all the limitations of claim 9.

l. **Claim 30** inherits all the limitations of claim 10.

Allowable Subject Matter

9. **Claims 5,6,15-20,25-26** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

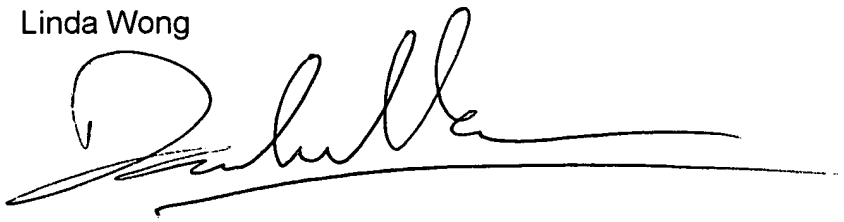
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linda Wong whose telephone number is 571-272-6044. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Linda Wong



DAC HA
PRIMARY EXAMINER